NE58K9430 series training

K&C RND GROUP

SAMSUNG Electronics

SAMSUNG DIGITall
everyone's invited

Agenda

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General Specification

New Appearance Design

- DUAL TRUE CONVECTION
- KITCHEN FIT DESIGN
- 5 BURNERS WITH 2 DOUBLE RING
- LED DISPLAY

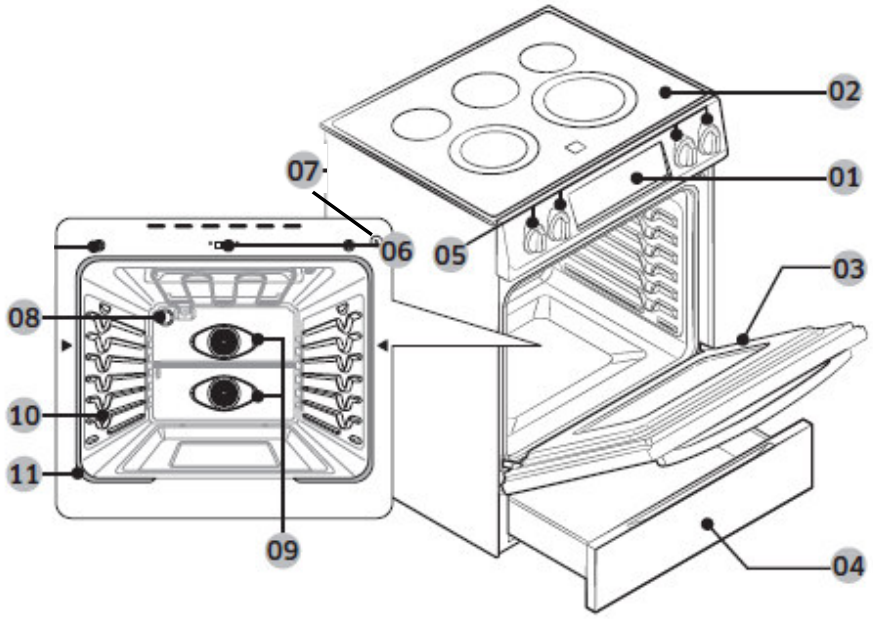
Specification

Model		Basic(NE58F9500SS)	New(NE58K9430SS)
Category		Convection	Convection
Overall	Width	30”	30”
	Installation type	Slide in	Slide in
	Color availability	STS	STS
Control	Oven	Touch	Touch
	Cook top	Knob	Knob
	Display	VFD	LED
	Electronic clock	Yes	Yes
	Control lock capability	Yes	Yes
	Audible preheat signal	Yes	Yes
Cook top	Material	Ceramic glass	Ceramic glass
	# of element	5	5
Power	LR	6” – 1,200W	6” – 1,200W
	RR	6” – 1,200W	6” – 1,200W
	CR	Warming Center(100W)	Warming Center(100W)
	LF	6”/ 9” – 1,400W/3,000W	6”/ 9” – 1,400W / 3,000W
	RF	6”/9”/12” – 1,100W/2,200W/3,000W	6”/9”/12” – 1,100W/2,200W/3,000W

Specification

Model		Basic(NE58F9500SS)	New(NE58K9430SS)
Oven	Capacity(cu.ft)	5.8	5.8
	Broil element	4,200 watts	4,200 watts
	Bake element	3,000 watts	3,000 watts
	Convection system	Yes	Yes
	Convection element	Yes(1,250W/240V)	Yes(1,250W/240V)
	# of Racks	3	3
	Interior oven light	120V,40 watts	120V,40 watts
	Cleaning	Pyrolytic & Steam	Pyrolytic & Steam
Drawer	Type	Storage	Storage
	Element	NA	NA
	Warming rack	No	No
Dimensions (inch)	Oven interior (W x H x D)	25 x 21 8/1 x 19	25 x 21 8/1 x 19
	Exterior - Width	31 (Cook top) : 787mm 29 4/5 (Body) : 757mm	31 (Cook top) : 787mm 29 4/5 (Body) : 757mm
	Exterior - Height	36 (cook top) : 913mm	36 (cook top) : 913mm
	Exterior - Depth	26 3/10 (Door), : 667.7mm 28 3/5 (with handle) : 727.7mm	26 3/10 (Door), : 667.7mm 28 3/5 (with handle) : 727.7mm
	Net weight : Kg	85Kg	87Kg
Power	Rating(240V 60Hz)	Range : 4,700W Cook top : 8,500W	Range : 4,700W Cook top : 8,500W

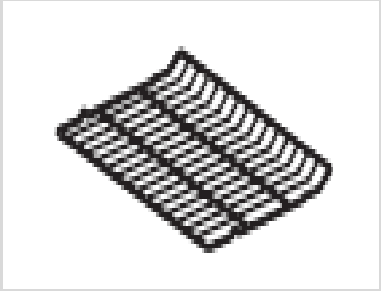
Oven Features



01	Oven control panel (See page 23 for more information)	**02**	Glass surface	**03**	Oven door
04	Storage drawer	**05**	Surface control knobs* (See page 20 for more information)	**06**	Self/steam clean latch
07	Automatic oven light switch	**08**	Oven light*	**09**	Convection fan
10	Shelf position	**11**	Gasket		

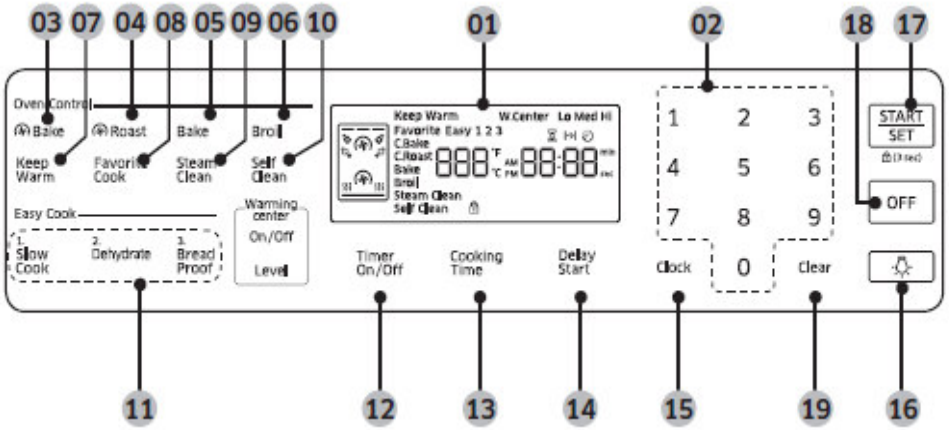
Features & Accessories

★ Accessories

Item	Description	Code No.	Q'ty
	Rack Flat	DG67-00108A	2

Functions

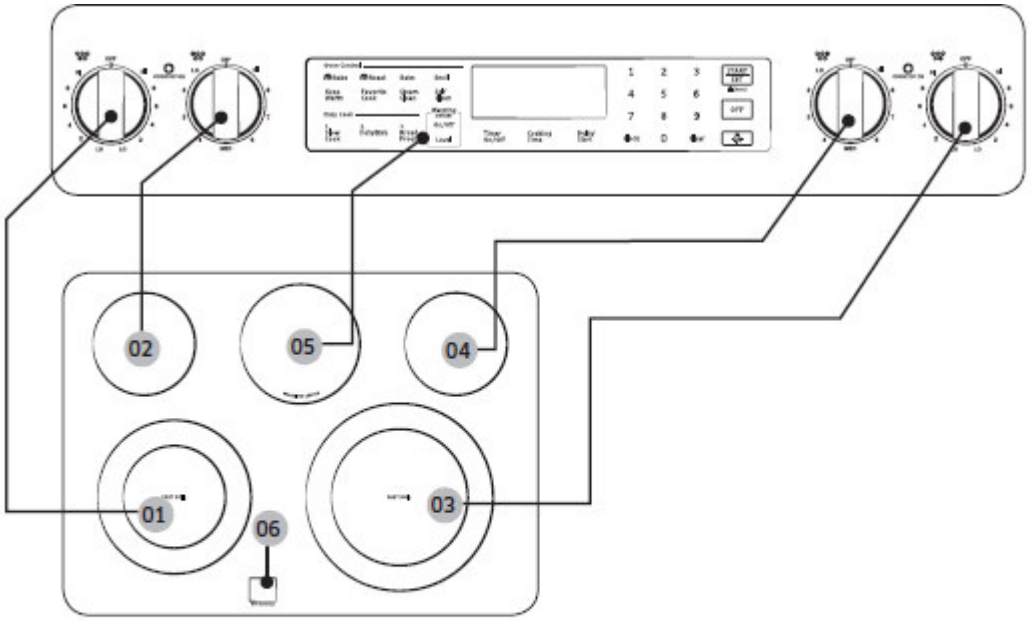
Control Panel - Oven



Common functions

1. **DISPLAY**: Shows the time of day, oven temperature, whether the oven is in the bake, broil or self-cleaning mode, and the time set for the timer or automatic oven operations.
   - : When you use the self-cleaning feature, this icon appears in the display.
   - : When you use the steam cleaning feature, this icon appears in the display.
   - : When the oven is pre-heating, this icon appears in the display.
2. **NUMBER PAD:** Use to set any function requiring numbers such as the time of day on the clock, the timer, the oven temperature, the start time, and length of operation for timed baking.
3. **CONVECTION BAKE:** Use to select the Convection bake function of the oven.
4. **CONVECTION ROAST:** Use to select the Convection roast function of the oven.
5. **BAKE:** Use to select the bake function of the oven.
6. **BROIL:** Use to select the broil function of the oven.
7. **KEEP WARM:** Use to select the keep warm function of the oven to keep cooked foods warm.
8. **FAVORITE COOK:** Use to save or recall a favorite cooking mode.
9. **STEAM CLEAN:** Use to select the steam cleaning function of the oven.
10. **SELF CLEAN:** Use to select the Self-cleaning function of the oven.
11. **EASY COOK:** Use to recall the easy cook recipe setting of the oven.
12. **TIMER ON/OFF:** Use to set or cancel the minute timer. The minute timer does not start or stop cooking.
13. **COOKING TIME:** Press, and then use the number pad to set the amount of time you want your food to cook. The oven will shut off when the cooking time has run out.
14. **DELAY START:** Press to set the oven to start and stop automatically at a time you set. (Bake, Conv.bake/Roast, Cooking Time, and self clean only.)
15. **CLOCK:** Use to set the time of day.
16. **LAMP:** Press to turn the oven light on or off.
17. **START/SET:** Press to start any cooking or cleaning function in the oven.
18. **OFF:** Press to cancel all oven operations except the clock and timer.
19. **CLEAR:** Use to cancel previously entered temperature or times.

Control Panel - Surface cooking

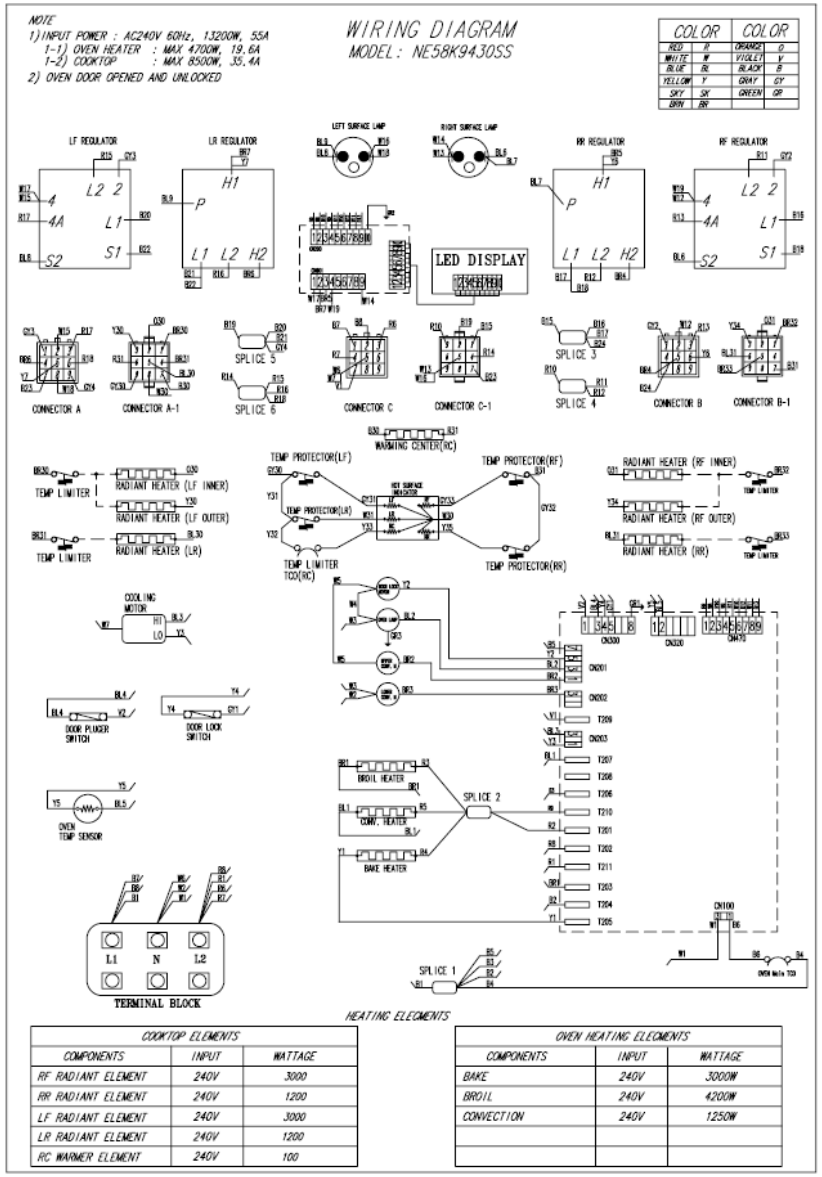


01	Left Front: 6"/9", 3,000 W	**02**	Left Rear: 6", 1,200 W	**03**	Right Front: 9"/12", 3,000 W
04	Right Rear: 6", 1,200 W	**05**	Warming center: 100 W	**06**	Hot surface indicator

Hot surface indicator

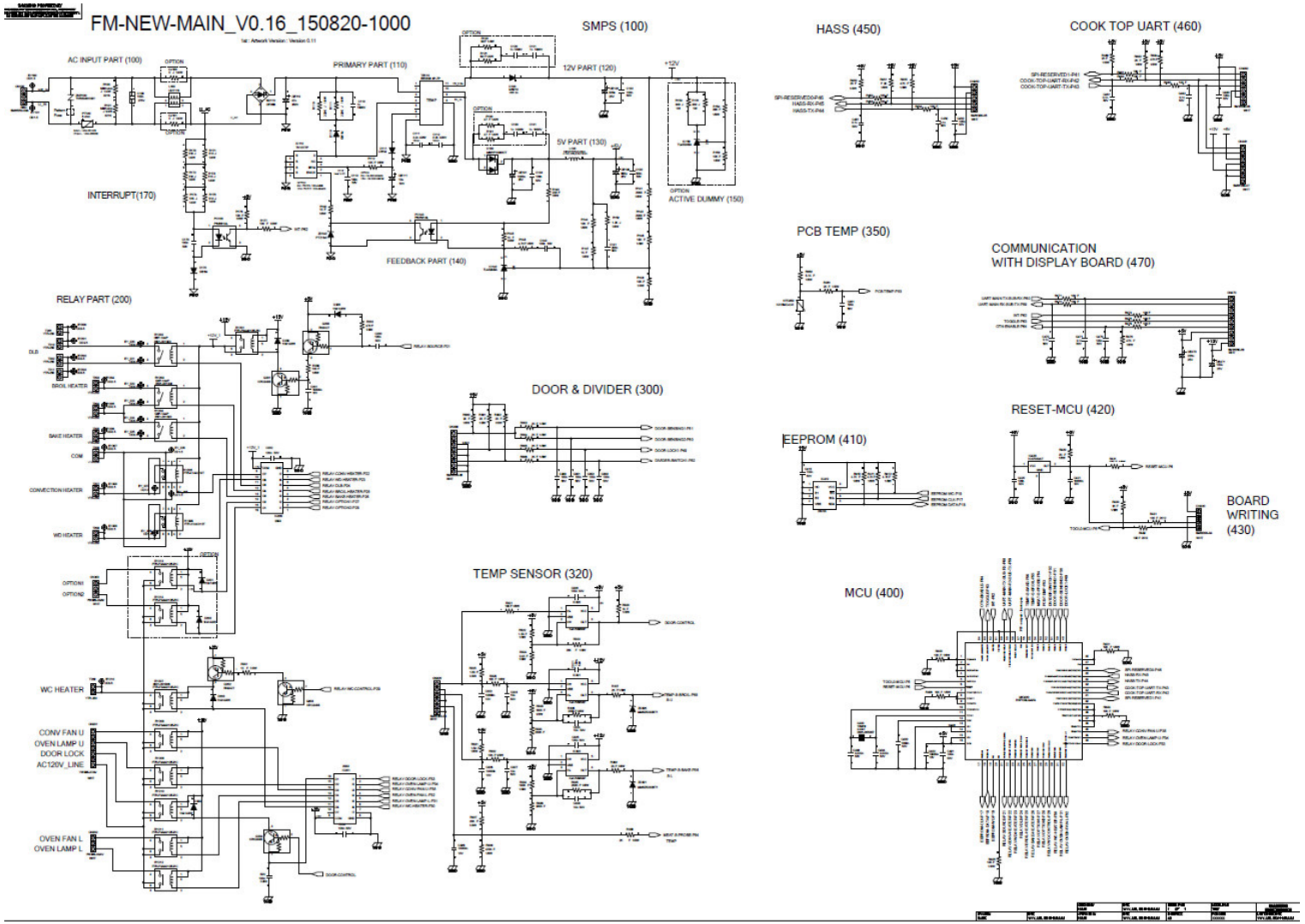
- Comes on when the unit is turned on or hot to the touch.
- Stays on even after the unit is turned off.
- Glows until the unit is cooled to approximately 150°F.

Wiring Diagram



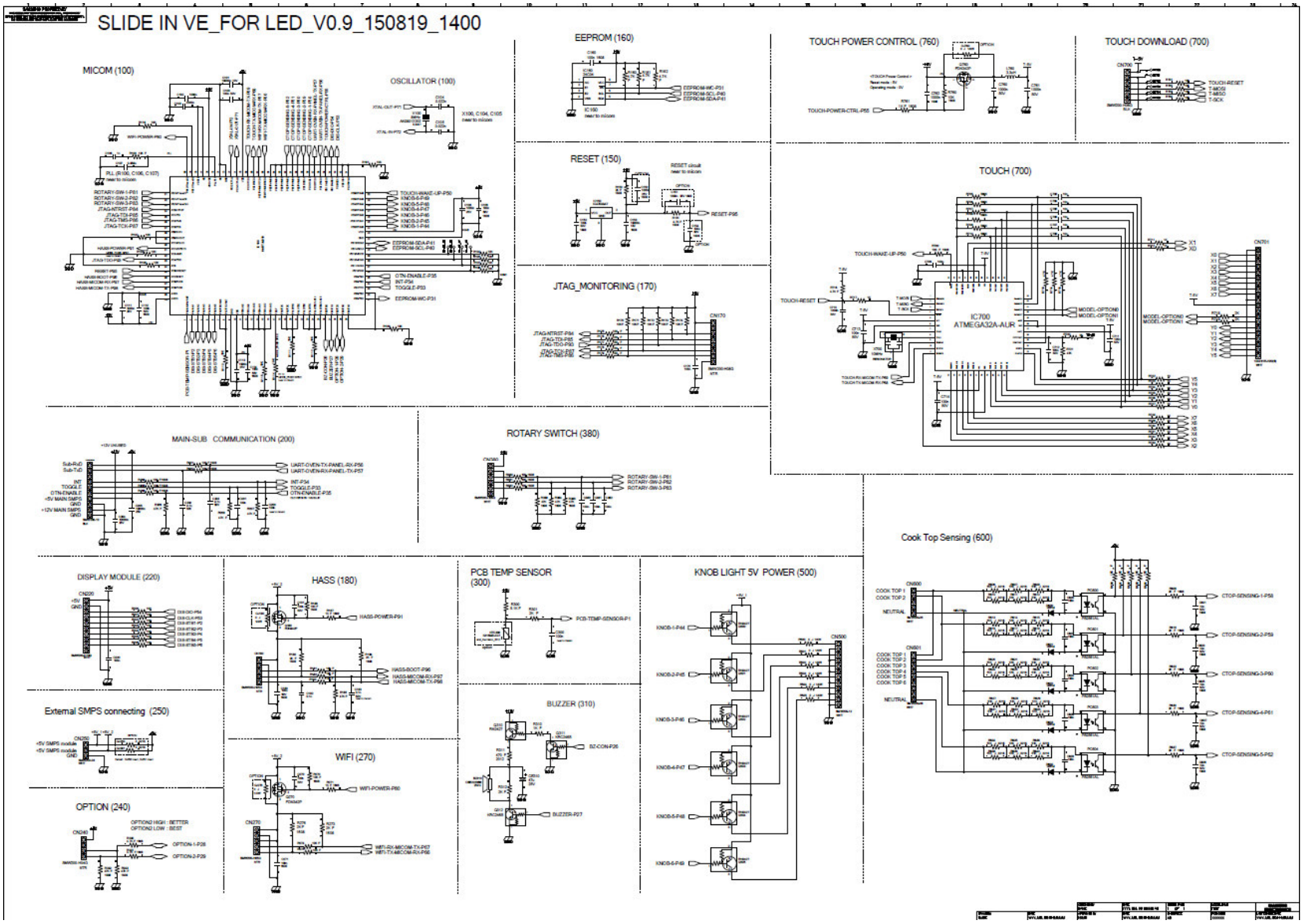
NE58K9430SS_wiring

Schematic



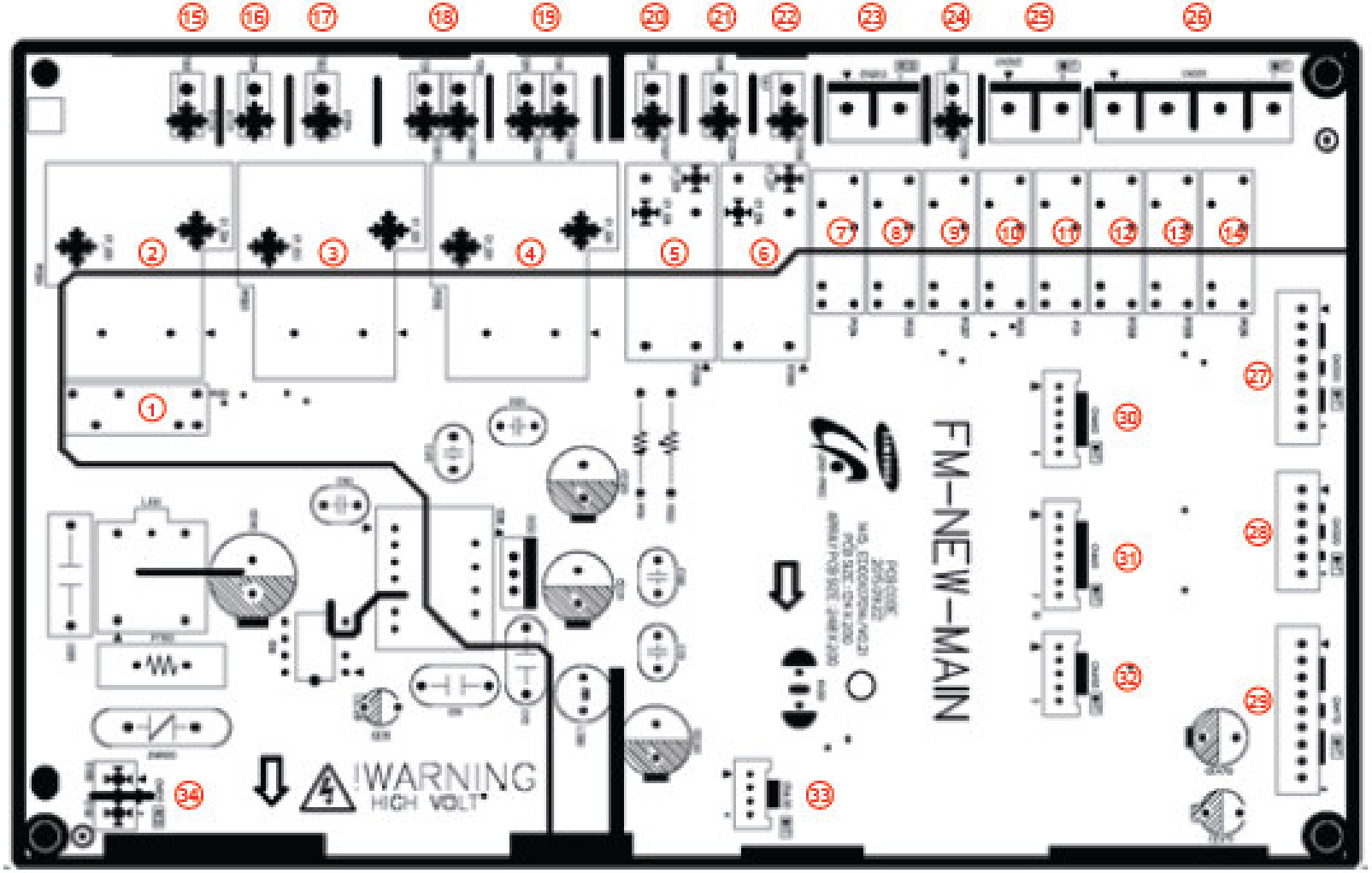
circuit

Schematic



circuit_sub

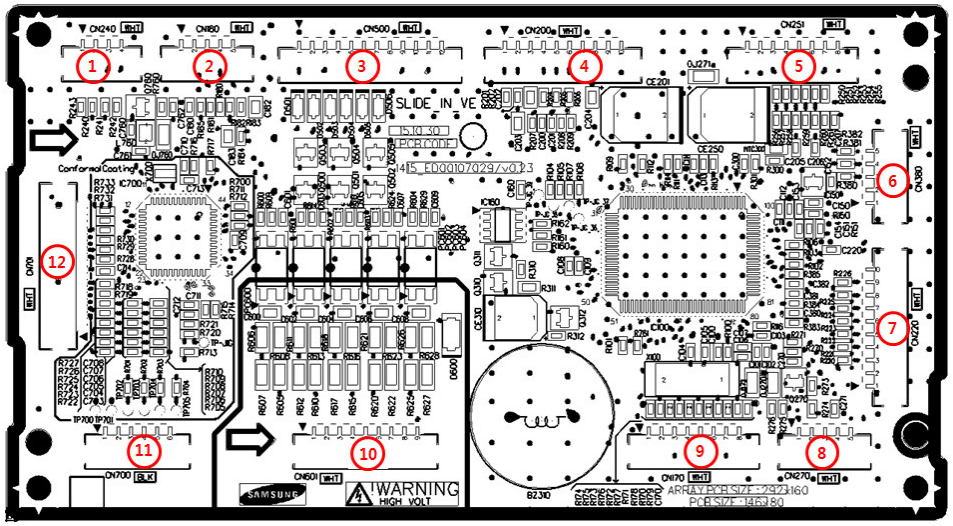
Schematic



Schematic

1	RY201	RY-Source Relay	This is relay which control source of DLB, BAKE, BROIL, W/Drawer relay
2	RY204	Bake-Heater Relay	"Broil relay(Ry203), Bake relay(Ry204), convection relay(Ry205) will be on-off working by mi-com signal after DLB relay is worked. (Broil relay : It will not be problem with reversing the order in inserting Brown) (Bake relay : It will not be problem with reversing the order in inserting Blue)
3	RY203	Broil-Heater Relay	"Broil relay(Ry203), Bake relay(Ry204), convection relay(Ry205) will be on-off working by mi-com signal after DLB relay is worked. (Broil relay : It will not be problem with reversing the order in inserting Brown) (Bake relay : It will not be problem with reversing the order in inserting Blue)
4	RY202	DLB Relay	Circuit is designed to have broil relay or convection relay worked after DLB relay is being worked by Double line break. (It will not be problem with reversing the order in inserting Red)
5	RY206	Warming Drawer Heater Relay	This is Relay to control Warming Drawer-Heater.
6	RY205	Convection Relay	"Broil relay(Ry203), Bake relay(Ry204), convection relay(Ry205) will be on-off working by mi-com signal after DLB relay is worked. (Broil relay : It will not be problem with reversing the order in inserting Brown) (Bake relay : It will not be problem with reversing the order in inserting Blue)
7	RY214	OPTION (Cooling Fan)	This is a spare relay. (This relay is connected with Cooling fan Lo in this model)
8	RY213	OPTION (Cooling Fan)	This is a spare relay. (This relay is connected with Cooling fan Hi in this model)
9	RY207	WC-Heater Relay	This is Relay to control Warming Centor-Heater.
10	RY212	Oven-Lamp-L Relay	This is relay which is connected with Oven-Lamp-Low.
11	RY211	Oven-Fan-L Relay	This is relay which is connected with Oven-Fan-Low.
12	RY208	Conv-Fan-U Relay	This is relay which is connected with Conv. Fan.
13	RY209	Conv-Lamp-U Relay	This is relay which is connected with Conv-Lamp-Upper
14	RY210	Door Lock Relay	This is relay which is connected with door lock motor.
15	T205	Bake Terminal	This is terminal to connect harness with Bake relay.
16	T204	Broil Terminal	This is terminal to connect harness with Broil relay.
17	T203		
18	T211	DLB Terminal	This is terminal to connect harness with DLB relay.
	T202		
19	T201		
	T210		
20	T206	Convection-Heater Terminal	This is terminal to connect harness with convection-heater relay.
22	T207		
21	T208	WD-Heater Terminal	This is terminal to connect harness with relay to get heater on warming drawer work.
23	CN203	spare connector	This is for spare relays (RY213, RY214). (This connector is connected with Cooling fan in this model.)
24	T209	WC-Heater Termainal	This is terminal to connect harness with relay to get heater on warming centor work.
25	CN202	Relay Connector	OVEN FAN L, OVEN LAMP L
26	CN201	Relay Connector	CONV FAN U, OVEN LAMP U, DOOR LOCK, AC120V_LINE
27	CN300	Door Lock, Divider Connector	This is connector which is connected with Door plung switch and Door lock switch, divider switch.
28	CN320	Oven Sensing Connector	This connector which is connected with oven sensor.
29	CN470	Sub Communication Connector	This is connector which is connected with Sub PCB to communicate.
30	CN460	COOK TOP UART	(For ELEC OVEN) This is to connect Cook-Top to FM-NEW-MAIN PBA.
31	CN461	COOK TOP UART	(For GAS OVEN) This is to connect BLDC-FAN-SUB PBA to FM-NEW-MAIN PBA.
32	CN450	HASS	This is to connect HASS.
33	CN430	On Board Writing Connector	When do micom revision, connect to micom writer. And this connector which is connected with Touch PCB to communicate.
34	CN100	Power Connector	This is to supply power with SMPS.

Schematic



1	CN240	Option Connector	This is connector to select H/W option.
2	CN180	HASS Connector	This is connector for HASS.
3	CN500	Knob Light 5Volt Power connector	This is connector to provide 5V power to knob light.
4	CN200	Main Communication Connector	This is connector which is connected with Main PCB to communicate.
5	CN251	BLDC-FAN-SUB Control Connector	This is to connect BLDC-FAN-SUB PBA. (For GAS Model)
6	CN380	Rotary Switch Connector	This is connector for Rotary Switch.
7	CN220	LED Module Connector	This is connector for LED Display Module.
8	CN270	WIFI Connector	This is connector to connect WIFI Module.
9	CN170	JTAG Monitoring Connector	This is connector for JTAG equipment.
10	CN601	Knob sensing Connector	This is connector to check knob ON/OFF.
11	CN700	Touch Download Connector	This is connector to download program for touch IC.
12	CN701	Touch Film Connector	This is to connect Touch-Film.

Disassembly

Tool for assembly and disassembly

Item	How to use	Pictures
Screw driver(+)	Use for assembly and disassembly of all screws	
Tubing Wrench	Use for assembly and disassembly of tubing to the cup	
7mm Vox Driver	Use for assembly and disassembly of injector nozzles. [cooktop/Broil/Bake burner]	
9mm Vox Driver	Use for assembly and disassembly of injector nozzles. [Convection Fan]	

COVER-BACK GUARD WIRE, COVER-BACK MAIN WIRE AND PCB-MAIN

WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. **Turn off the electrical supply going to the range.**
2. **Pull the range away from the wall so that you can access the rear panel.**
3. **Remove the 9 screws from the Cover-back main wire.**

PCB MAIN

WARNING
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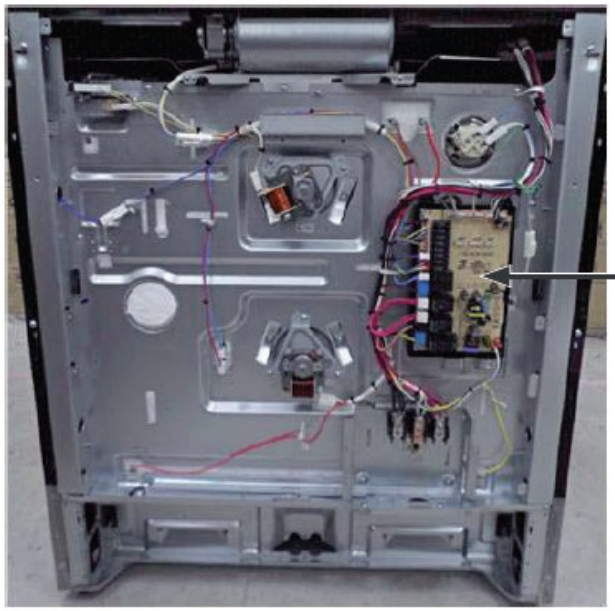


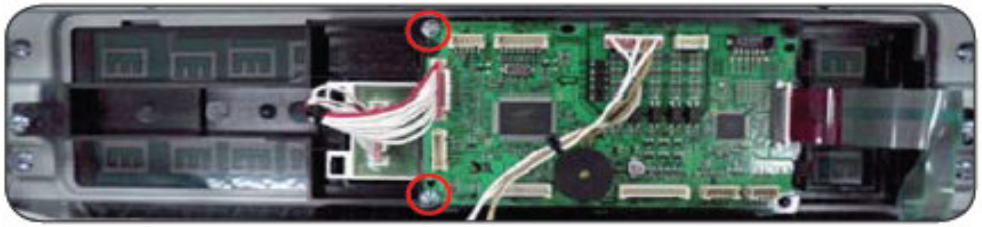
1. Turn off the electrical supply going to the range.
2. Pull the range away from the wall so that you can access the rear panel.
3. Remove cover back main wire.
4. There is 1 PCB on the rear of the range.

SUB PCB

WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply going to the range.
2. Remove 4 screws under the control box.
3. Remove connector on SUB PCB.



4. There is 1 PCB on the rear of the range.

Assy-Cook top

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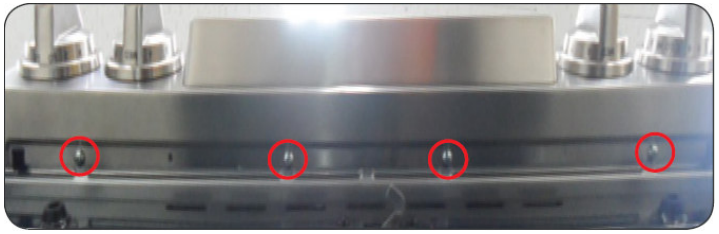
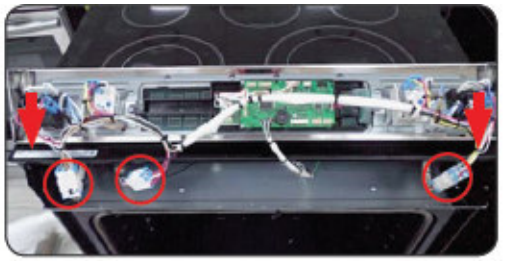
CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

CERAMIC GLASS COOKTOP REMOVAL

1. Unplug the cord or disconnect power
2. Open oven door and remove the 4 screws located at the under control box, then close the door.





3. Disconnect 3 wire harness connectors. Then remove the 2 screws.
4. Be careful to locking, please lift in the direction of the arrow control box.
5. Remove 2 screws at the rear (Right, Left)

6. Remove cover back main wire.

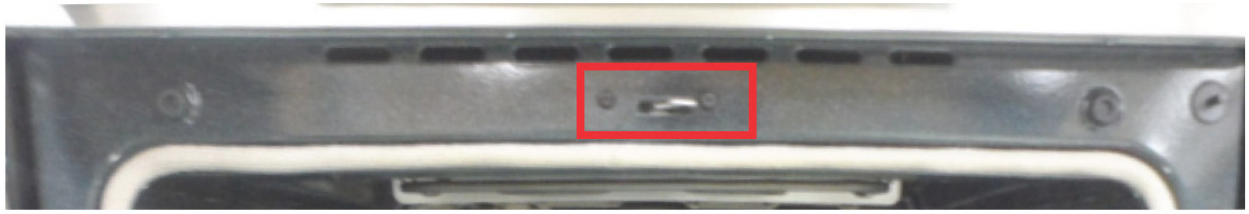
LATCH-DOOR AND SWICH-DOOR PLUNGER

WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

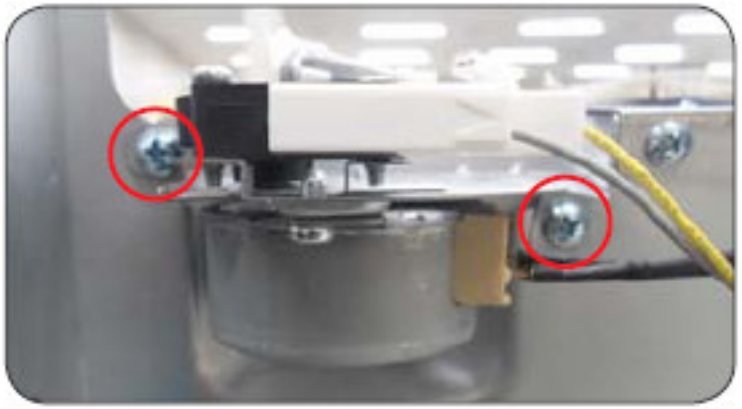
CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1> Turn off the electrical supply going to the range.
2> Open the oven door.
3> Raise the cooktop
4> To remove the door latch:

a) Remove two screws from the front of cavity.



b) Remove two screw from Cover-Back Guard and remove latch-door.



LATCH-DOOR AND SWICH-DOOR PLUNGER

WARNING
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CAUTION
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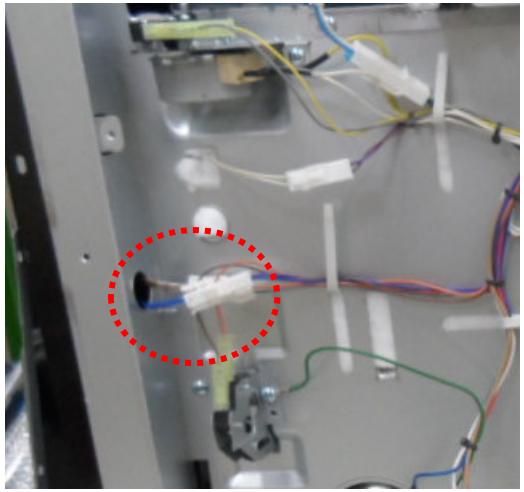

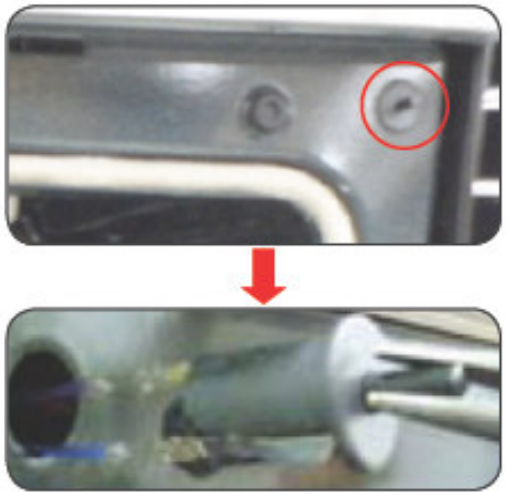

To Remove the Switch-Door Plunger

1> Remove The Cover-Back Guard wire.

2> Release the connector.

3> Remove the Switch –Door Plunger from the range. Take out carefully with shaking up and down by using tool

HEATER-BROIL

WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

CAUTION
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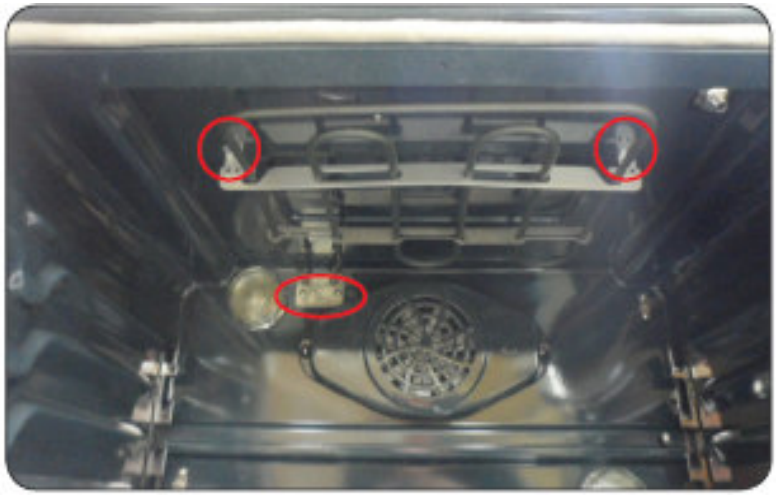
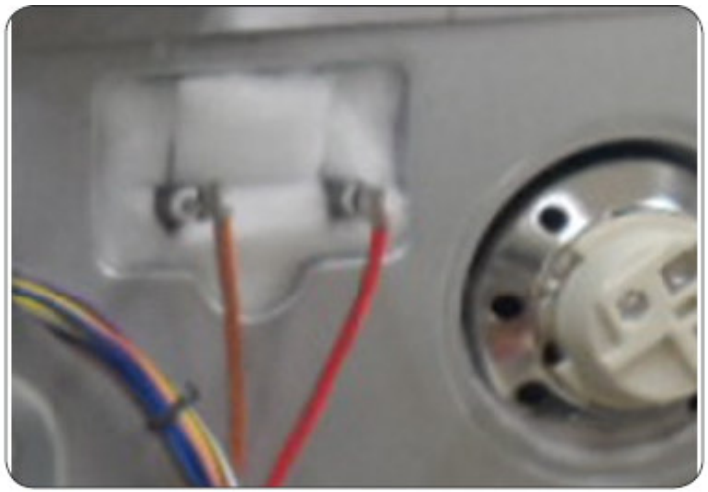




1> Turn off the electrical supply going to the range.

2> Open the oven door and remove the racks from inside the oven.

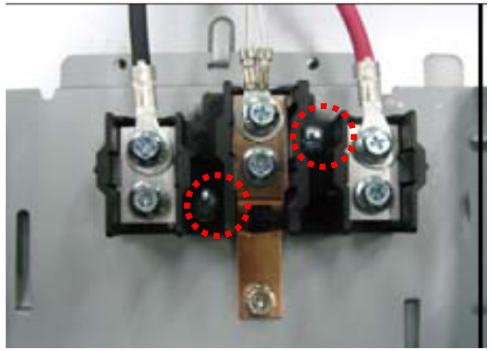
3> Remove oven from its mounting location and remove the rear cover.

4> Remove the two wires from the broil element.

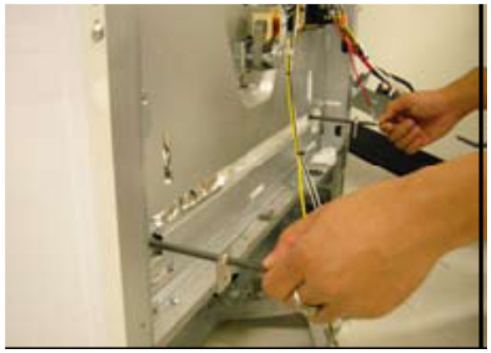
5> Remove the four screws that are securing the broil element to the cavity. Remove the broil element.

Disassembly

HEATER-BAKE



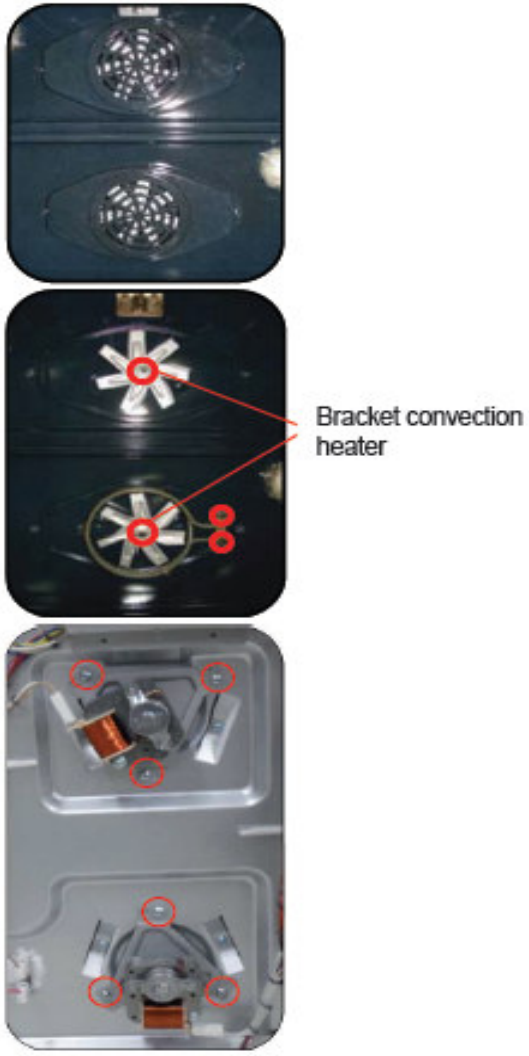
1> Unplug range or disconnect power.
2> Pull the range out of its mounting location so that you can access the rear of the unit.
3> Remove Cover-Back Main Wire.
4> Remove Terminal-Block and Bracket-Cover Access by unscrewing the three screws.
5> Disconnect the two wires from the heater bake element.



6> Remove the two screws securing the heater bake.
7> Cut the Adiabatic-Rear based on the lower side.
8> Carefully pull out Heater-Bake and replace it.

Disassembly

CONVECTION ELEMENT



1> Disconnect power and remove oven racks.

2> Pull the range out of its mounting location so that you can access the rear of the unit.

3> Remove Cover-Back Main Wire from the unit.

4> Remove oven door.

5> Unscrew 2 screws and remove Cover-Casing

6> Unscrew 2 screws and remove Bracket-convection heater to remove Heater-Convection.

7> Unscrew nut of Fan-Convection, and 2 Fan-Convection.

8> Unscrew 3 points and disconnect a Motor-Convection wire and disconnect Heater-Convection wire.

Lamp

WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

To replace bulb and bulb cover

1> Disconnect power.

2> Remove oven door.

3> Turn the glass bulb cover in the back of the oven counterclockwise to remove.

4> Turn bulb counterclockwise to remove from socket.

5> Replace bulb and cover by turning clockwise.

To replace socket assembly

6> Disconnect the wires from the socket terminals.

7> Use a screwdriver and bend the clips on the socket away from the edges of the liner hole(there are 6 clips on the socket),
and pull the socket out of the liner. Push the socket out from the back of the unit.

TEMPERATURE SENSOR

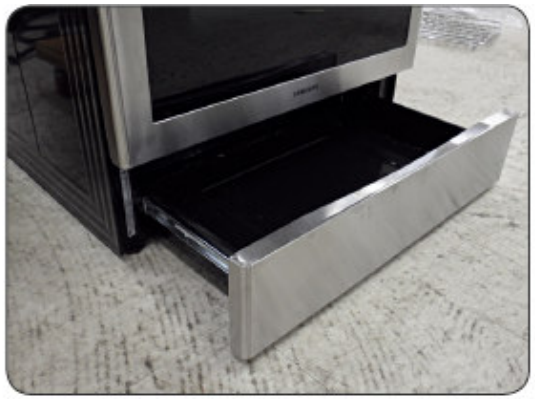
WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

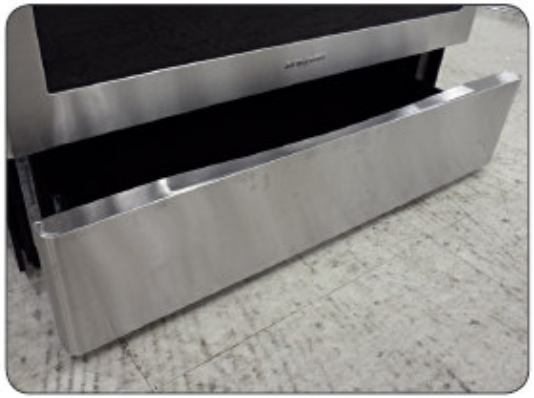
CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1> Turn off the electrical supply going to the range and remove the oven from its mounting location.
2> Remove oven door and racks from inside the oven.
3> Unscrew Sensor-Thermistor.
4> Remove Cover-Back Main Wire and disconnect a wire from Sensor-Thermistor.
5> Replace the Sensor-Thermistor.

Disassembly

STORAGE DRAWER





To remove Assy-Drawer:

1> CAUTION -Turn power OFF before removing the storage drawer.

2> Open the drawer to the fully opened position.

3> Locate glide lever on each side of drawer, push down on the left glide lever and pull up on the right glide lever.

4> Pull out the storage drawer.

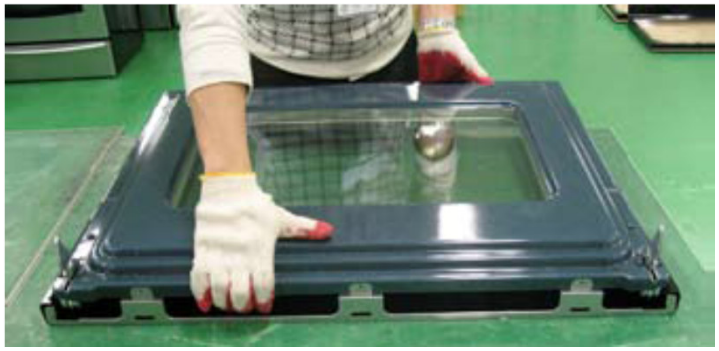
OVEN DOOR

To remove Oven Door:
1> Fully open the door
2> Pull the hinge locks downward
3> Firmly grasp both side of the door at the top.
4> Close door to the door removal position, which is approximately 5 degrees. Lift door up and out until the hinge arm are clear of the slot.

To replace door:
1> Firmly grasp both sides of the door at the top position.
2> Fully open the door.
(If the door will not fully open, it means that the indentation is not seated correctly in the bottom edge of the slot. Push the hinge locks up to the locked position.)
3> Close the oven door.

HANDLE-DOOR AND GLASS-INNER

1> Remove the oven door from the range
2> Place the oven door on a padded work surface with the front glass facing down.
3> Remove 3 bottom screws from the door.
4> Remove 2 Handle-screws from the door.

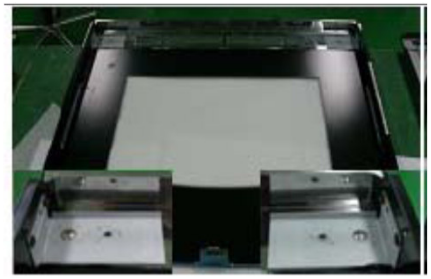


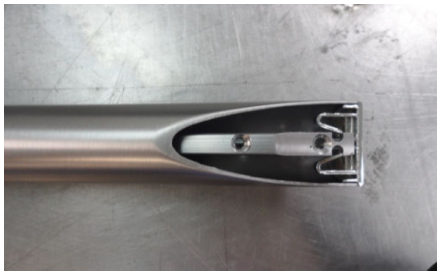
5> Lift the door rear assembly off the front assembly and set it aside

6> Remove 2 spacers and 2 screws.

Disassembly

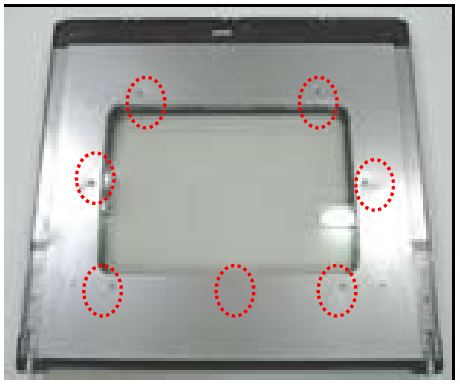
HANDLE-DOOR AND GLASS-INNER





To remove Handle-Door

1> Remove 2 screws to remove Handle- Door



To remove Glass-Inner

1> Remove 6screws from rear side of door to remove 2 Hinge-Door.

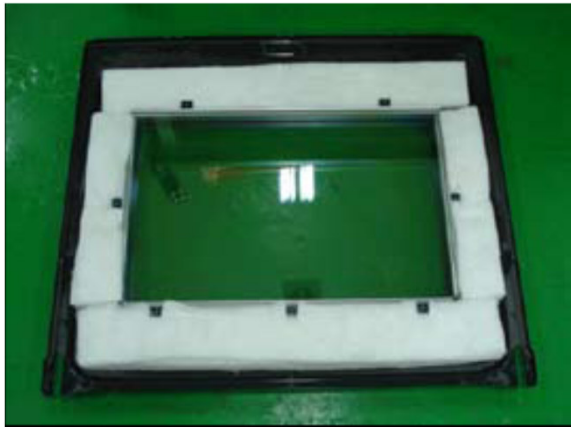
2> Remove 4screws ro remove Glass-Inner Sub Assembly

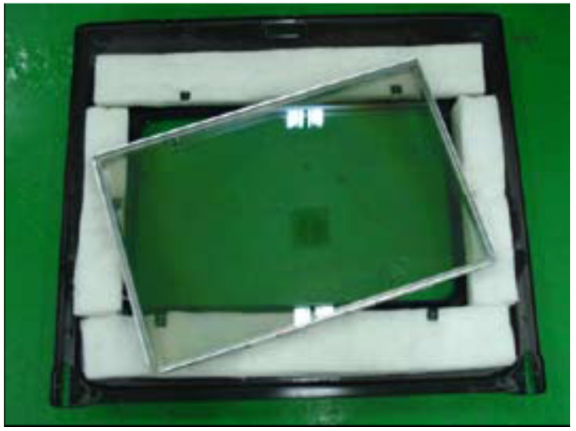
3> Remove 7screws ro remove Baffle- Door

HANDLE-DOOR AND GLASS-INNER

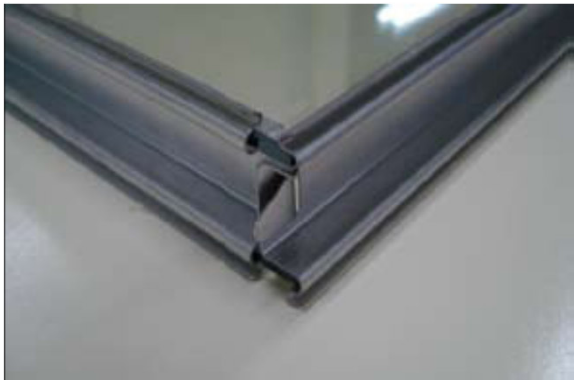
WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

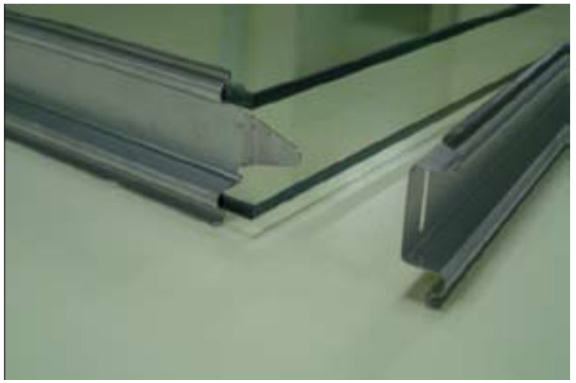
CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.





4> Remove Baffle-Door and take out the Glass-Inner assembly.



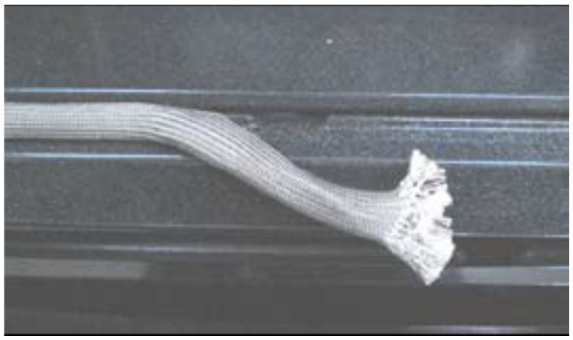


5> Unfold 2 flanges of Cover-Frame Inner Glass to taking out Glass-Inner

GASKET-DOOR

WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.



1> Open the oven door to its fully down position.
2> Pull the ends of the gasket out of the liner holes.
3> Pull the oven door gasket clips out of the holes until all of the clips are removed.

REASSEMBLY NOTE

When you install the new gasket, make sure that all of the clips are seated in their liner holes, and that the ends of the gasket are pushed fully into their holes. Use the pointed end of a pencil to push the gasket ends into the holes.

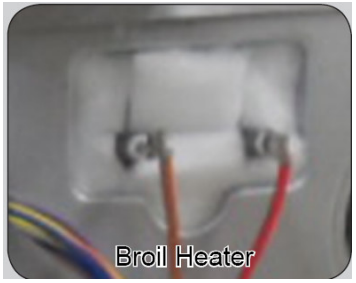
PANEL-SIDE

WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1> Turn off the electrical supply.
2> Remove the oven door from the range
3> Pull the range away from the wall so you can access the back of the unit.
4> Remove the 8 screws from the rear of Panel-Side and remove Cooktop.
5> Remove the (each) 3screws from the top the Panel-Side.
6> Pull the back of the side panel out from the range approximately 10˚
7> Push forward and remove Panel-Side.

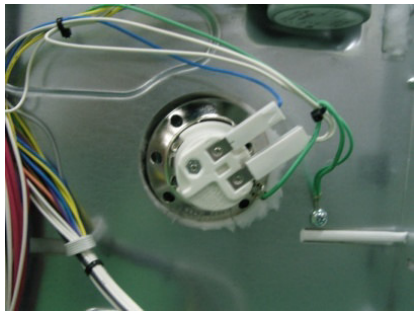
Parts Checking Method

FIGURE	TESTS MEASURE	RESULTS
 < Broil Heater >	* Measure resistance values of heater's terminal after taking off harness from heater. * Measure voltage of heater's terminal after making oven work by pressing broil keypad.	* Approx : 12 ~ 14Ω (at the room temperature) * Terminal voltage of Broil heater : AC 240V * Replace or repair harness
   < Bake Heater >	* Measure resistance values of heater's terminal after taking off harness from heater. * Measure voltage of heater's terminal after making oven work by pressing bake keypad. (Make sure that voltage has to be measured for more than 1 minute because heater is supposed to on-off cycling work.)	* Approx : 17 ~ 19Ω (at the room temperature) * Terminal voltage of bake heater : AC 240V * Replace or repair harness

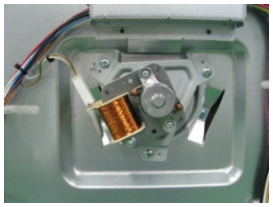
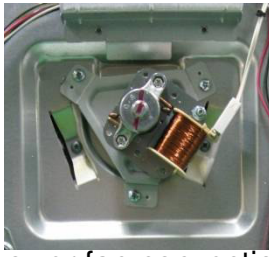
Parts Checking Method

FIGURE	TESTS MEASURE	RESULTS
 < Convection Heater >	* Measure the resistence values of heater's terminal after taking off harness from heater. * Measure the voltage of heater's terminal after having oven worked, by pressing convection bake keypad. (Make sure that voltage has to be measured for more than 1 minute because heater is supposed to on-off cycling work.	* Approx : 41 ~ 46Ω(at the room temperature) * Terminal voltage of convection heater : AC 240V * Replace or repair harness * Replace or repair assy display

Parts Checking Method

FIGURE	TESTS MEASURE	RESULTS
 < Oven lamp >	* First of all, make sure that lamp filament is disconnected or not. * Measure resistance socket's terminal after separating harness from heater and removing lamp. * Measure the voltage of socket's terminal after having lamp worked by pressing oven light keypad.	* Approx : Ω * Terminal voltage of lamp socket : 120V * Replace or repair harness. * Replace or repair main PCB
 < Door Lock >	* Measure the state of micro switch and motor after taking off harness from the heater. * Check whether lock work normally by pressing cooking time button and delay start keypad at the same time for 3 seconds.	* Lock motor Resistance : 2500 ~ 2700Ω (at the room temperature) voltage : 120V * Micro switch COM-NO * Replace or repair if harness has been loosen or disconnected.

Parts Checking Method

FIGURE	TESTS MEASURE	RESULTS
 < Upper fan-convection >  < Lower fan-convection >	* Measure resistance value of Motor terminal after taking off harness from Motor. * Measure Voltage of Motor's terminal after making oven work by pressing bake keypad. (Make sure that voltage has to be measured for more than 1 minute because Fan is supposed to on-off Cycling work.)	Approx * Convection Fan : 20 ~ 30Ω * Terminal Voltage of Convection Fan : 120V * Replace or repair harness * Replace or repair main PCB.

Parts Checking Method

FIGURE	TESTS MEASURE	RESULTS
 < Oven sensor>	*Check whether the resistance values of oven sensor is same with a chart's one . * Check whether wire or housing has been loosen or disconnected .	Approx * at the room temperature :1080Ω .
 <Door Plunger Switch>	*Check the state of working of switch . *Make sure whether wire, housing and terminal is connected with switch has been damaged or not .	Normal open : 0Ω Normal close : ∞Ω * Replace or repair if wire or terminal has been damaged .

Failure Display Codes

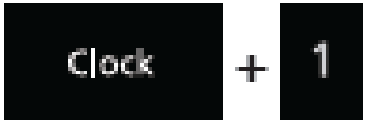
There is a check code. Possible check codes during use can be checked before service.

1. Touch ‘Clock’ key.

2. Touch a number ‘1,2,3,4’ keys.

3. Touch ‘START/SET’ key.

4. Touch ‘ Clock’ and ‘Num 1’ keys at the same time for 3 seconds. Check codes are displayed.



5. Touch number ‘0’ key, the last 5 check codes can be checked.

   But, if the oven turns off, the stored check codes are deleted.

6. Touch ‘OFF’ key to return to normal display mode.

Sensor

Failure code	CAUSE	SOLUTION
C-20	Oven sensor opened (over 2950Ω)	1. Disconnect power. Open the back cover. Disconnect sensor harness from control Measure sensor resistance :1080Ω at the room temperature → If there are any problems, replace oven sensor. 2. If there is not any problem with oven sensor, Please check whether there is a damaged terminal or wire on harness. 3. Check resistance of oven sensor connector on main PCB (Normal:2850Ω)
	Oven sensor shorted. (Under 930Ω)	

Trouble Shooting

"C-20"

Disconnect power

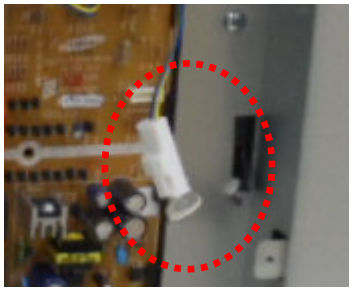
Measure sensor resistance.
(1080Ω at the room temperature)

Check the connecting condition of harness
(Oven sensor and CN320 of main PCB)

Measure resistance of connector CN301
of Main PCB (Nomal : 2850Ω)

Make sure the pattern, soldering, damaged parts related to oven sensor of main PCB, and repair them or replace main PCB according to case

END

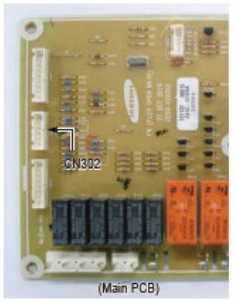


Lower sensor

Replace oven sensor

END

* reconnect
* repair damaged harness replace.



Failure code	CAUSE	SOLUTION
C-21	Oven heating over	1 . Disconnect power . Open the back cover . Disconnect sensor harness from control .Measure sensor resistance :1080Ω at the room temperature → If there are any problems, replace oven sensor . 2 . Check the broil, bake and convection heater . Check the resistance of the each heater . 3 . Check whether DLB of sub PCB, Broil, Bake and Convection heater relay are being worked normally . 4 . Check whether there is any disconnection of harness which is linked with main PCB on main PCB . 5 . Check the resistance of oven sensor connector on main PCB . (Normal : 2850Ω)

Trouble Shooting

"C-21"
Or
"C-d1"

Disconnect power and assy display

* Check the DLB, Bake and Broil relay. (Normal:∞ Ω)
* Check whether there is any damaged parts of PCB pattern.

No

* Replace Main PCB
* Solder again if pattern is damaged or parts is wrong contacted.

END

Ok

* Measure oven sensor resistance. (1080Ω at the room temperature)
* Check the connecting condition of harness related with oven sensor.

No

*Reconnect after replacing the oven sensor.

END

Ok

* Check connector and harness connected to main PCB.
* Check whether harness on connector (CN320) of Main PCB is connected normally into the connector(CN320) or not.

No

Replace or repair the harness.

Ok

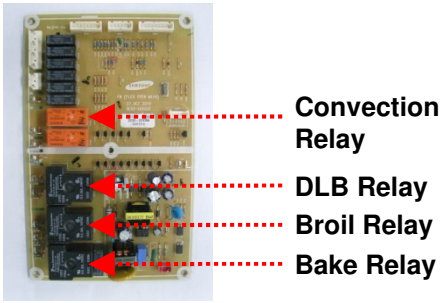
With replacing main PCB, and make set work.

No

Replace sub and main PCB

END

Main PCB



Failure code	CAUSE	SOLUTION
C-d1	Door locking error	1. Disconnect power. Open the cover back. Check whether harness has been connected with door lock switch and motor. 2. Confirm whether resistance value of door lock motor is to be normal one or not. 3. With operating door lockout, measure a voltage of connector on harness which is linked with door lock motor. (Normal voltage : AC 120V) 4. Check whether door locking switch is being worked normally.

Trouble Shooting

C-d1

*Disconnect power.
*Get rid of harness connected with Lock motor.

* Micom switch check (com-NO)
* Measure resistance of Lock motor Coil.(1750~1850Ω at the room temperature)

No → * Replace micro switch or Lock motor. → END

•Check oven sensor

Ok

*Check whether
*Check whether voltage(AC 120V) is offered to lock motor with letting lock work or not.

No → * Repair damaged harness or Replace.

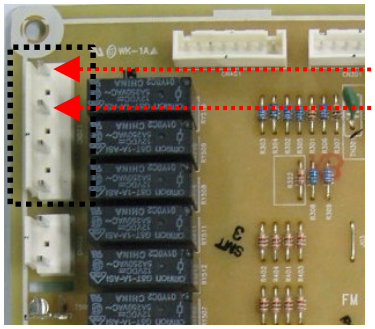
Ok

*Check whether harness connected normally into CN201 of main PCB.

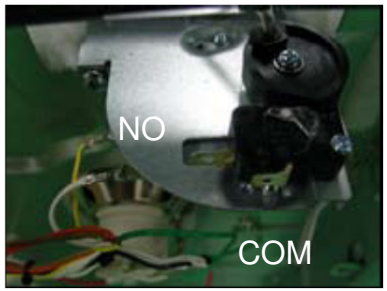
No → * Repair damaged harness or Replace.

*Measure resistance CN501 of main pcb.
(COM-NO: ∞ at the room temperature)
*COM : black color *NO : yellow color

No → * Replace main PCB.
* Solder again if pattern is damaged or parts is Wrong Contacted. → END



Main PCB

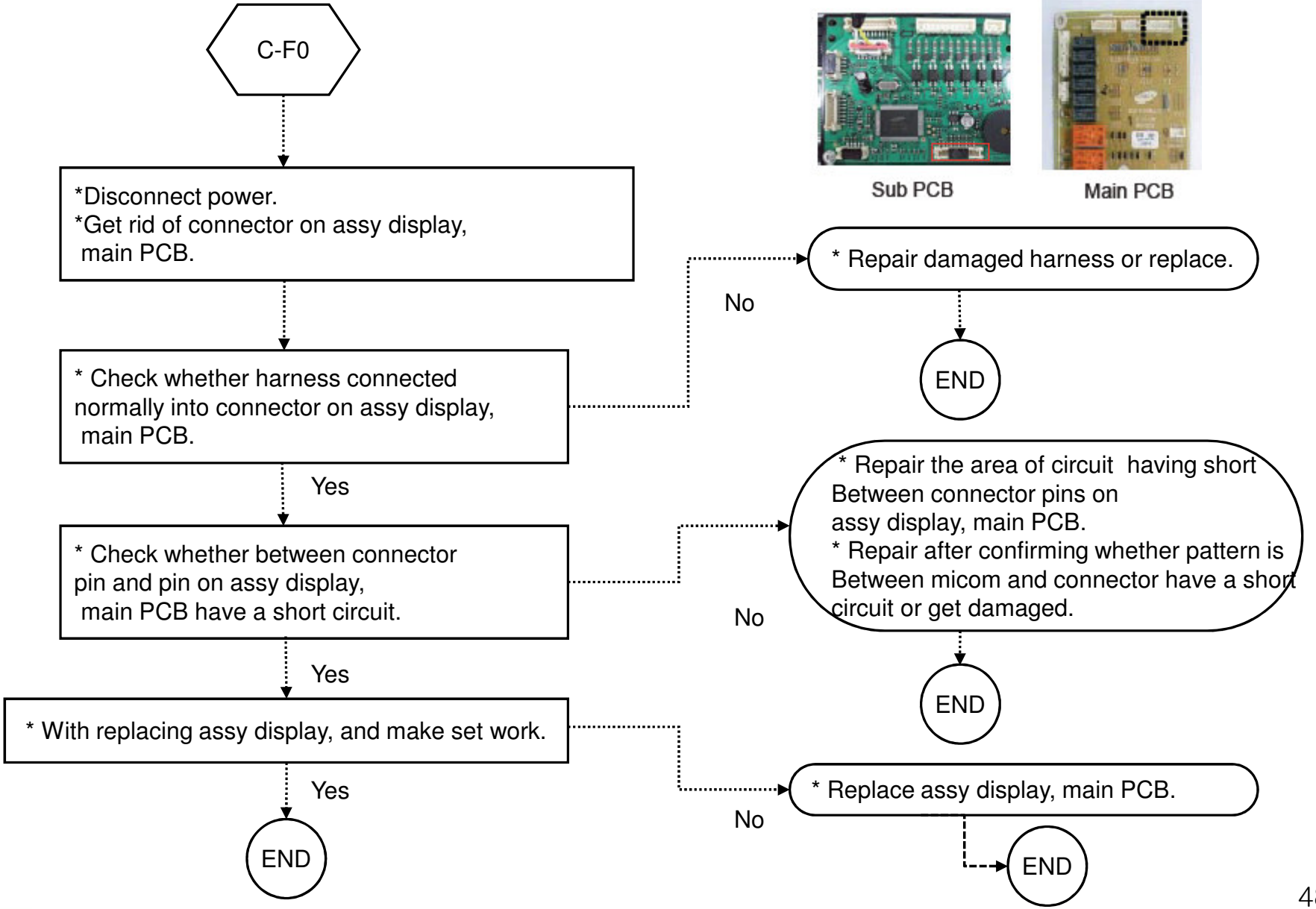


Failure code	CAUSE	SOLUTION
C-F0	This code occurs if communication between the Main and Sub PBA is interrupted.	1. Check whether connector of main PCB has been inserted. 2. Check whether connector of sub PCB has been inserted. 3. If there is not a problem occurred with connector on sub PCB and main PCB, replace the main PCB.

Trouble Shooting

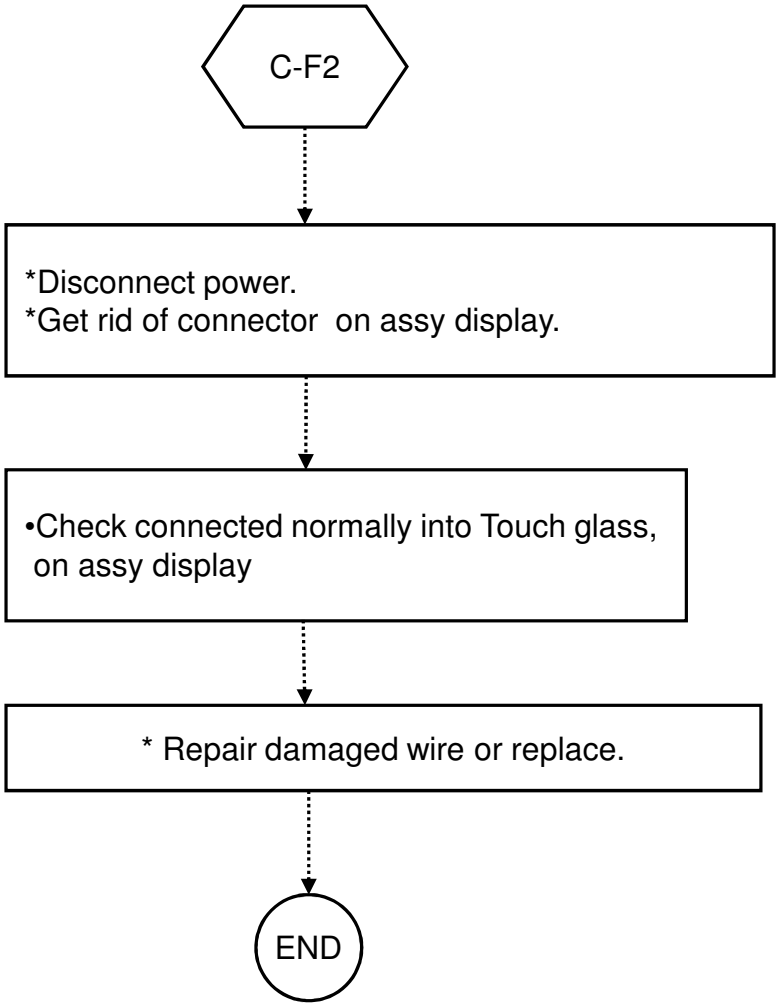
Sub PCB

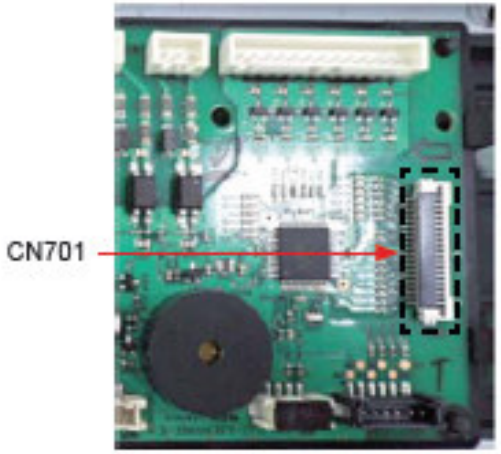
Main PCB


C-F0
*Disconnect power.
*Get rid of connector on assy display, main PCB.
* Check whether harness connected normally into connector on assy display, main PCB.
No
* Repair damaged harness or replace.
END
Yes
* Check whether between connector pin and pin on assy display, main PCB have a short circuit.
No
* Repair the area of circuit having short Between connector pins on assy display, main PCB.
* Repair after confirming whether pattern is Between micom and connector have a short circuit or get damaged.
END
Yes
* With replacing assy display, and make set work.
No
* Replace assy display, main PCB.
END
Yes
END

Failure code	CAUSE	SOLUTION
C-F2	This code occurs if communication between the main and touch is interrupted.	1. Check whether connector of sub PCB has been inserted. 2. If there is not a problem occurred with connector on sub PCB, replace the sub PCB. 3. If can't solve the problem after replace the sub PCB, replace the control box.

Trouble Shooting


C-F2
*Disconnect power.
*Get rid of connector on assy display.
•Check connected normally into Touch glass, on assy display
* Repair damaged wire or replace.
END



Sub PCB

Trouble Shooting

C-d0

*Disconnect power.
*Take out keypad cable from the sub PCB.

•Check whether between connector pin and pin on sub PCB have a short circuit.

No

•Repair the area of circuit having short between connector pins on sub PCB.
•.Repair after confirming whether pattern is between micom and connector have a short circuit or get damaged.

Ok

•Make sure whether between keypad and cable Have a short circuit.

No

Ok

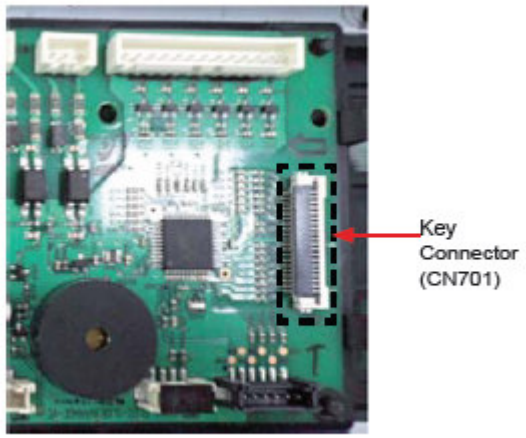
•Replace control PCB (Touch control PCB + glass)

END

END

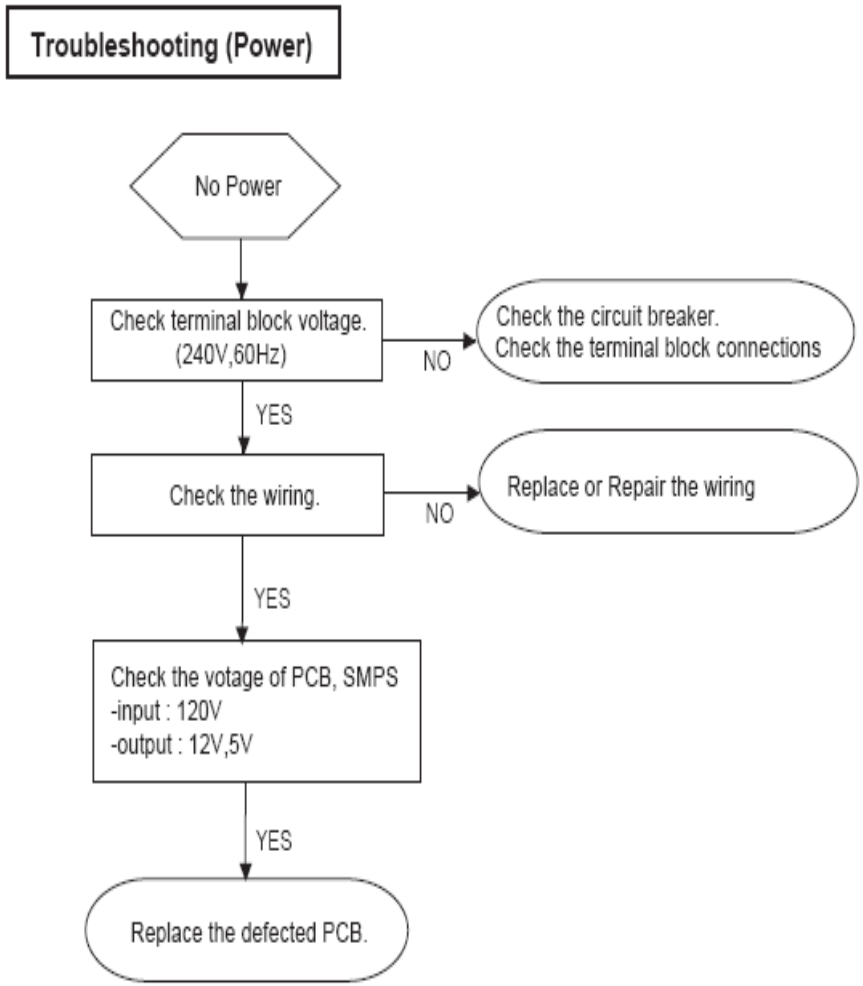
* Replace or repair keypad

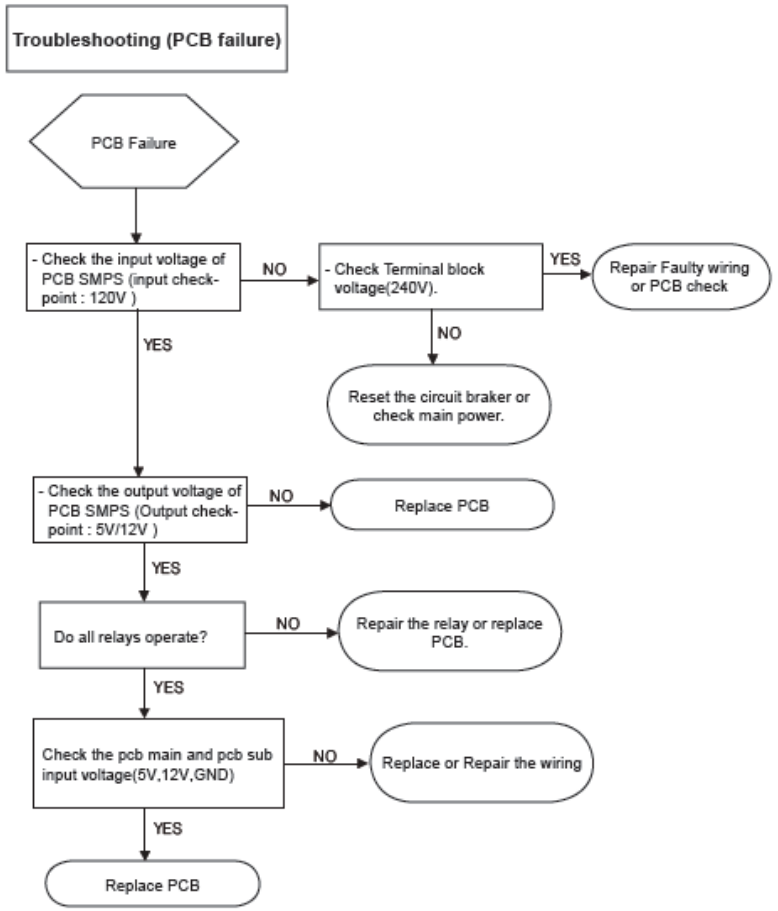
END



Sub PCB

Trouble Shooting





Checkpoints before service request

SYMPTOM	DIAGNOSIS	REMEDY
Oven not operating (No power, No display)	* Measure an input voltage. (240/120V or 208/120V) * Measure an input voltage of terminal block.	* check circuit breaker. * Make sure that the state of wire is connected with Terminal block.
	* Measure voltage of connector on main PCB L1~N : 120V	* Replace of repair if harness has been loosen or disconnected.
	* Make sure that the relay on sub PCB is being worked normally. * Make sure whether harness between connector on sub PCB and connector on main PCB has been loosen or disconnected.	•Replace sub PCB if relay has been damaged or there is any cracking on the sub PCB. •Repair harness is connected main PCB with sub PCB •After confirming whether harness has been inserted into relay on sub PCB or not, take action follow as; - Replace or repair harness. - Replace or repair sub PCB.
	* Measure resistance both ends of terminal on thermostat. (normal : 0 ohms) * Check whether harness is connected terminal on thermostat has been loosen or disconnected. * Measure voltage regulator on main PCB. - IC02 : 7812(DC 12V) - IC03 : 7805(DC 5V)	* Replace the thermostat. * Replace or repair harness. * Replace or repair after confirming the state of working of main PCB

Checkpoints before service request

SYMPTOM	DIAGNOSIS	REMEDY
Oven temperature is risen slowly	* Make sure whether harness is connected with Broil, Bake and convection heater has been loosen or disconnected.	* Repair and replace harness.
	* Make sure whether Broil, Bake, and convection heater has been disconnected.	* After taking out terminal from each heater, measure resistance of heater and then replace that if it is not a normal resistance value.
	* Make sure that heater relay and pattern on main PCB	* Replace or repair relay. * Replace or repair main PCB.
Oven temperature is risen fast.	* Check whether temperature is risen over 400˚F(202˚C) within 10 minutes in a state of room temperature.	* Replace or repair it if relay on sub or main PCB have a short circuit.
	* Check whether harness has been misconnected or have a short circuit.	* Replace or repair harness.
	* Measure resistance values of each heater are within a normal extent or not.	* Replace heater is in a abnormal state.

Checkpoints before service request

SYMPTOM	DIAGNOSIS	REMEDY
The self-cleaning feature will not operate when warming center or warming drawer is on.	* This is in normal state.	* The self-cleaning feature will not operate when warming center or warming drawer is on
Keypad is not worked normally in partially or entirely.	* Make sure that keypad cable on main PCB is in normal state.	* Replace after confirming whether it has been loosen or disconnected.
	* Make sure connector on main PCB or PCB pattern.	* Replace or repair after confirming whether keypad cable has been loosen or Disconnected.
Oven lamp is not working.	* Check the oven lamp relay and connector .	* Replace or repair if harness has been loosen or disconnected. * Replace oven lamp relay or Resource relay. * Replace main PCB
	* Measure the resistance value of both ends of lamp terminal.	* Replace lamp if it has been disconnected.(120V / 40W)

Checkpoints before service request

SYMPTOM	DIAGNOSIS	REMEDY
Cooktop is not working or being occurred a abnormal working.	* Make sure that Radiant element or Infinite switch corresponded RR(Right Rear), RF(Right Front), LR(Left Rear), LF(Left Front).	* Replace Infinite switch or Radiant element.
	* Check whether harness is connected with radiant element or Infinite switch has been loosen or disconnected.	* Replace or repair harness
	* Check whether there is any crack or the area of being disconnected of harness.	
	* Measure whether RC(Rear Center) Heater has been connected with warming center relay on main PCB normally or not.	* Replace or repair Warming Center. * Replace or repair Warming Ry-source relay. * Replace main PCB. * Replace or repair if harness has been loosen or disconnected.
Convection fan is not rotated.	* Check whether Convection fan relay on main PCB and connector is in normal.	* Replace or repair Relay. * Replace or repair connector.
	* Make sure whether harness between Connector on main PCB and connector on main PCB has been connected normally.	* Replace or repair harness. * Replace or repair connector. * Replace main PCB.

Checkpoints before service request

SYMPTOM	DIAGNOSIS	REMEDY
It has smell or smoke when oven has been started initially.	* This is in normal state.	* It has smell or smoke with burning dirt in oven or a foreign substance when oven has been working initially. * Ventilate after getting self cleaning mode to work.
LED display is a little bit dim partially or invisible entirely.	* LED display is inferior.	* Replace LED or sub PCB.
There is not buzzer beep sound when keypad is being worked.	* Check the state of buzzer on main PCB and whether PCB pattern have a short circuit or has been open.	* Replace or repair main PCB.

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Thanks